

THE FEMALE OF THE ROACH PARCOBLATTA
CAUDELLI, AND THE OCCURRENCE OF
THE SPECIES ON LONG ISLAND, N. Y.

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In 1917 Mr. Morgan Hebard published his very useful paper on The Blattidae of North America North of the Mexican Boundary, and there records a roach with short tegmina taken by me at Wading River, N. Y., July, 1914, as a female of *Parcoblatta fulvescens*. In the Journal, N. Y. Ento. Soc., Dec., 1918, the writer recorded *Parcoblatta virginica*, *P. uhleriana*, and *P. fulvescens*, species bearing considerable superficial resemblance to one another, as occurring at Wading River and attracted by the honey-dew of Aphids.

Recently while preparing the manuscript list of the Orthoptera for the New York State List of Insects, it was observed that no males of *fulvescens* were at hand from New York State, but a number of males collected on Long Island having four specialized areas on the dorsal part of the abdomen were present. They could not be separated from *caudelli* Hebard heretofore supposed to be more southern in its range. The female of this species was described in the paper mentioned above as having the tegmina reaching beyond the apex of supra-anal plate; "sustained flight possible."

It was evident that owing to the lack of males of supposed *fulvescens* and females of *caudelli*, that there might be a mix-up, and perhaps after all the females of *caudelli* might have short tegmina and otherwise closely resemble the same sex in *fulvescens*. This now appears to be the case. The range of *fulvescens* is probably not as far to the north as has been supposed, at least none have as yet been collected on Long Island. In the writer's collection there are specimens of both *fulvescens* and *caudelli* from Lakehurst, New Jersey.

The female of *caudelli* may be separated from that of *fulvescens* by its slightly smaller size, by having the discal part of the pronotum darkened instead of almost clear brown, and by the under part of the abdomen being very dark brown instead of light brown. In *fulvescens* the entire under surface is nearly of a uniform color. The abbreviated tegmina of *caudelli* are in shape between those of *uhleriana* and *fulvescens*; they are not as squarely cut off as in the latter, nor as produced and rounded at the outer extremity as in the former.

The females of *uhleriana* and *fulvescens* seem to be much more easily separated than are the males, which can be readily confused. In addition to the inner distal angles of the cerci from the sixth to ninth joints being acutely but briefly produced in male *uhleriana* and not so in *fulvescens*, as pointed out by Mr. Hebard, it may be added that the cerci have a more flattened appearance in *uhleriana*. Also they, and most of the dorsal portion of the abdomen, are usually darker in color than in *fulvescens*.

Pantala flavescens captured by *Anax junius*.

Dr. Wm. H. Wiegmann has given the writer a female *Anax junius* Drury and a female *Pantala flavescens* Fab. collected in the Botanical Garden, Bronx Park, September 3, 1924. The first named dragonfly was seen to capture the *Pantala* in mid-air, and bear it to the ground. It was so intent upon eating the head of its victim that the Doctor secured it with his hands. The writer has seen the somewhat more powerful and longer legged *Anax longipes* catch one of the large species of *Libellula*, but *Anax junius*, in his experience, is generally content with smaller prey than *Pantala flavescens*.—WM. T. DAVIS.